

WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY  
LETTERS PATENT OF THE UNITED STATES IS:

1. A method for operating a flue gas purification  
5 plant (10) comprising a plurality of parallel absorber  
chambers (11), in which in each absorber chamber (11),  
CO and NO are simultaneously oxidized by means of a  
catalyst in a first absorber (15) according to the  
10 SCONOx principle and the resulting NO<sub>2</sub> is absorbed on  
the catalyst surface, in which SO<sub>2</sub> is furthermore  
oxidized by means of a catalyst in a second absorber  
(14) upstream of the first absorber (15) according to  
the SCOSOx principle and the resulting SO<sub>3</sub> is absorbed  
15 on the catalyst surface, in which method the absorber  
chambers (11) are successively regenerated by means of  
a regeneration gas containing hydrogen and/or hydrogen  
compounds in regularly repeating regeneration cycles  
affecting all the absorber chambers (11), characterized  
20 in that the regeneration time of the second absorber  
(14) within the regeneration cycle is respectively  
selected to be long enough to guarantee sufficient  
regeneration of the second absorber (14).

2. The method as claimed in claim 1, characterized  
in that each absorber chamber (11) is allocated a  
25 regeneration time within the regeneration cycle, in  
that for full regeneration of an absorber chamber (11)  
in the regeneration time the second absorber (14) is  
first regenerated in a first time segment and the first  
absorber (15) is regenerated in a subsequent second  
30 time segment, and in that the first time segment lasts  
at least about 5 minutes.

3. The method as claimed in claim 2, characterized  
in that the second time segment lasts at least about 3  
minutes.

35 4. The method as claimed in claim 1, characterized  
in that the first and second absorbers (14, 15) are  
regenerated independently of one another.

5. The method as claimed in one of claims 1 to 4, characterized in that the first absorbers (15) of the absorber chambers (11) are regenerated in a first regeneration cycle, and the second absorbers (14) of the absorber chambers (11) are regenerated in a second regeneration cycle, and in that the second regeneration cycle lasts substantially longer than the first regeneration cycle.

6. The method as claimed claim 5, characterized in that only the second absorber (14) of an absorber chamber (11) is respectively regenerated in each first regeneration cycle.